

## **REMARKS**

### **Status of the Claims**

Claims 2-8 are currently pending in the application. Claims 1-9 stand rejected. The Examiner objects to claim 2. Claims 2, 3 and 6 have been amended as set forth herein. Claims 1 and 9 have been cancelled herein. All amendments and cancellations are made without prejudice or disclaimer. No new matter has been added by way of the present amendments. Specifically, the amendment to claim 2 is supported by the specification at, for instance, page 9, lines 15-20. Amendment of claim 3 is to remove subject matter from the claim. Amendment of claim 6 is to substitute the phrase "microorganism" for the word "cell" and is supported internally in the preamble of claim 6. Reconsideration is respectfully requested.

### **Objections to the Specification**

The Examiner states that the continuity data has not been entered in the present specification. (*See*, Office Action of October 5, 2007, at page 2, hereinafter, "Office Action"). Applicants have provided an amendment to the specification herein directed at entering the cross-reference as requested by the Examiner. This amendment does not introduce new matter into the specification. Entry thereof is respectfully requested.

The Examiner further states that the Title of the Invention is objected to for reciting the word "novel." (*Id.*). However, the Title of the present Invention according to our records and the records of the USPTO, as reflected in the PAIR system, is the following: "Gene participating

in growth promoting function of acetic acid bacterium an utilization of the same." Thus, the Title of the Invention as presently pending does not recite the term "novel" as alleged by the Examiner. The Examiner is respectfully requested to check the Title of the Invention again and contact Applicants if there is a discrepancy somewhere within the record not identified by Applicants.

The Examiner further objects to the specification for reciting the term "novel" in the Abstract. Although Applicants fully believe their invention to be novel, to expedite prosecution, the Abstract has been amended herein without prejudice or disclaimer to remove the term "novel" as requested by the Examiner.

Thus, in light of the above, reconsideration and withdrawal of the objections to the specification are respectfully requested.

#### **Objections to the Claims**

The Examiner objects to claim 2. (See, Office Action, at page 3). The Examiner states that claim 2 depends from a non-elected claim and encompasses non-elected subject matter. Correction thereof is requested by the Examiner.

However, inspection of the claims presently pending and filed in the present application reveals that in fact, claim 2 does not depend from claim 1. While it is true that claim 1 was withdrawn from further consideration as being directed to a non-elected invention, and is presently cancelled herein without prejudice or disclaimer, claim 2 is not now, nor was it ever

dependent on claim 1. Claim 2 is, and has always been, an independent claim. Thus, no correction thereof is deemed necessary.

Again, the Examiner is urgently requested to review the presently pending application and its disclosure and to contact Applicants' representative as soon as possible at the contact number given below if any of Applicants' comments in response to any of the Examiner's objections are in any way inconsistent with the specification, claims, drawings and other information presently before the Examiner.

Applicants wish to address any of these inconsistencies as quickly as possible and to determine the source of these inconsistencies so as to continue prosecution as efficiently as possible.

Reconsideration and withdrawal of the objection to claim 2 are respectfully requested.

#### **Objections to the Drawings**

The Examiner objects to Figure 3 of the drawings because the Examiner states that Figure 3 "requires a sequence identifier in the drawing or in the Brief Description thereof." (*Id.* at page 3). However, inspection of the specification presently of record and available on the PAIR system reveals that the sequence identifier "SEQ ID NO:2" is already recited on page 4, line 17, concerning the sequence disclosed in Figure 3 of the application. Again, Applicants respectfully request that the Examiner again check the specification on file at the USPTO and confirm that the correct specification is available and is consistent with our statements, above. If there is any

discrepancy, the Examiner is respectfully requested to contact Applicants so that the discrepancy in the USPTO files may be resolved.

Reconsideration and withdrawal of the erroneous objection to the Drawings are respectfully requested.

### **Rejections Under 35 U.S.C. § 101**

Claims 2 and 3 stand rejected under 35 U.S.C. § 101 because they allegedly are directed to non-statutory subject matter. (*See*, Office Action, at pages 3-4). Applicants traverse the rejection as set forth herein.

The Examiner states that the claims should be amended to recite "isolated" or "purified" to distinguish it from products which occur naturally. (*Id.* at page 4). Although Applicants do not agree that the presently pending claims do not recite statutory subject matter, to expedite prosecution, claims 2 and 3 have been amended herein without prejudice or disclaimer to recite, in part, "an isolated DNA" as requested and suggested by the Examiner.

Reconsideration and withdrawal of the rejection of claims 2 and 3 are respectfully requested.

## **Rejections Under 35 U.S.C. § 112, First Paragraph**

### Written Description

Claims 2 and 4-7 stand rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement. (*See*, Office Action, at pages 4-6). Applicants traverse the rejection as set forth herein.

The Examiner states that the phrase "has a sequence as shown in SEQ ID NO:2" is interpreted as meaning "any sequence found within SEQ ID NO:2" and that this claim "encompasses a vast genus of polynucleotides that have no correlation between the structure of the encoded polypeptide and its function of growth promoting." (*Id.* at page 5). The Examiner states that the specification only discloses SEQ ID NOS: 1 and 2 and that these sequences meet the written description requirements under US law. (*Id.* at page 6).

Although Applicants do not agree that claim 2 lacks written description support in the specification, to expedite prosecution, claim 2 has been amended herein without prejudice or disclaimer to recite, in part, "(A) a protein comprising the amino acid sequence according to SEQ ID NO: 2; or (B) a protein comprising an amino acid sequence derived from the amino acid sequence shown in SEQ ID NO: 2 by deletion of 1 to 10 amino acids, addition of 1 to 10 amino acids, or substitution of 1 to 10 amino acids and having a growth-promoting function."

Support for this amendment, especially the amendment to part (B) of claim 2, may be found in the specification at, for instance, page 9, lines 15-20.

The Examiner is referred to the guidelines for Written Description Requirement published January 5, 2001 in the Federal Register at Vol. 66, No. 4, pp. 1099-1110 (see <http://www.uspto.gov>). The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by disclosure of relevant, identifying characteristics. (Federal Register, Vol. 66, No. 4 January 5, 2001). However, disclosure of one representative may describe a genus when all of the procedures for making the members of that genus are known. For example, according to the USPTO Written Description guidelines, "procedures for making variants of SEQ ID NO:X which have 95% identity to SEQ ID NO:X and retain its activity are conventional in the art." (See, Example 14: Product by Function, *emphasis added*). Further, methods for isolating nucleic acids via hybridization are also well known in the art.

Therefore, Applicants assert that the genus encompassed by amended claim 2 is adequately described in the specification because even if a maximum of 10 amino acids are altered in the manner claimed, this would represent a change in only a maximum of 2.5% of the total sequence of SEQ ID NO:2, thus maintaining a sequence identity of more than 95%.

Since no specific or independent reasoning is provided for the rejection of dependent claims 4-7, dependent claims 4-7 are believed to be fully supported by the specification for, *inter alia*, dependent from a fully supported base claim, amended claim 2.

Reconsideration and withdrawal of the written description rejection of claim 2 and 4-7 are respectfully requested.

Enablement

Claims 2 and 4-7 stand rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. (See, Office Action, at pages 7-11). Applicants traverse the rejection as set forth herein.

The Examiner provides essentially the same reasoning for support of the enablement rejection as provided, above, concerning the written description requirement rejection.

In response thereto, Applicants incorporate by reference the comments made above, concerning the rejection based on the alleged lack of written description support for claim 2. That is, amended claim 2 is believed to fully comply with the enablement requirements of 35 U.S.C. § 112, first paragraph, for similar reasons provided above. Claim 2, at least as amended, encompasses only those sequences having at least 95% identity to SEQ ID NO:2 and the phrase "as shown in" has been replaced by more acceptable terminology commonly used in practice.

Reconsideration and withdrawal of the enablement rejection of claims 2 and 4-7 are respectfully requested.

**Rejections Under 35 U.S.C. § 112, Second Paragraph**

Claims 3-7 stand rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. (See, Office Action, at page 11). Applicants traverse the rejection as set forth herein.

The Examiner states that the claims are indefinite because the phrase "stringent conditions" is indefinite and that the specification provides no specific disclosure of stringent conditions for hybridization. (*Id.*).

Although Applicants believe that one of ordinary skill in the art certainly knows what stringent hybridization conditions are and the scope of Applicants' claims as presented in their original form, to expedite prosecution, claim 3 has been amended herein without prejudice or disclaimer to remove parts (B) and (C) which are believed to be the source of the Examiner's rejection.

Since no independent or specific reasoning is provided for the rejection of claims 4-7, claims 4-7 are also believed to be definite for, *inter alia*, dependent from a definite base claim, amended claim 3.

Reconsideration and withdrawal of the indefiniteness rejection of claims 3-7 are respectfully requested.

#### Rejections Under 35 U.S.C. § 102(b)

Claim 3 stands rejected under 35 U.S.C. § 102(b) as being anticipated by WPCOMMENT Accession No. CP000009\_19/c from *Gluconobacter oxydans*. (See, Office Action, at page 12). Applicants traverse the rejection as set forth herein.



The Examiner states that the disclosed SEQ ID NO:2 is 70.6% similar to the claimed sequences. Thus, the Examiner believes this sequence would likely hybridize to the claimed sequence unless specific hybridization conditions may be incorporated into claim 3. (*Id.*).

Although Applicants do not agree that claim 3 is anticipated by the cited reference, to expedite prosecution, claim 3 has been amended herein without prejudice or disclaimer to remove parts (B) and (C) directed to those sequences hybridizing to SEQ ID NO:2 under stringent conditions.

Reconsideration and withdrawal of the anticipation rejection of claim 3 are respectfully requested.

**CONCLUSION**

If the Examiner has any questions or comments, please contact Thomas J. Siepmann, Ph.D., Registration No 57,374, at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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Appendix: Clean Copy of Abstract